What is claimed is:

1. A multiplexed capillary electrophoresis system for the separation and detection of proteins and peptides, comprising:
   (a) an array of coplanar parallel capillary electrophoresis tubes, each having a first and a second end, said first ends being arranged in a two-dimensional array having a spacing corresponding to that of an array of wells of a microtiter plate;
   (b) an apparatus arranged to selectively deliver sieving matrix and a selected one of a plurality of liquids to said capillary tube second ends; and
   (c) a scanning means for exciting and detecting radiation from said array of capillary tubes.

2. The system of claim 1 wherein said sieving matrix is a size based sieving matrix.

3. The system of claim 2 wherein said sieving matrix includes dextran.

4. The system of claim 2 wherein said sieving matrix includes galactomannans.

5. A multiplexed capillary electrophoresis system for the separation and detection of biomolecules, comprising:
   (a) an array of coplanar parallel capillary electrophoresis tubes, each having a first

end and a second end, said first ends being arranged in a two-dimensional array having a spacing corresponding to that of an array of wells of a microtiter plate;

(b) an apparatus arranged to selectively deliver sieving matrix and a selected one of a plurality of liquids to said capillary tube second end; and

(c) a scanning means for exciting and detecting endogenous fluorescence radiation of the biomolecules from said array of capillary tubes.

6. The system of claim 5 wherein said scanning means includes a laser capable of producing radiation of an ultraviolet wavelength.

7. The system of claim 6 wherein said laser is a multiplied titanium sapphire laser.

8. The system of claim 5 wherein said sieving matrix is a size based sieving matrix.

9. The system of claim 8 wherein said sieving matrix includes dextran.

10. The system of claim 8 wherein said sieving matrix includes galactomannans.

11. The system of claims 1 wherein the array of coplanar parallel capillary electrophoresis tubes comprises at least 16 capillaries.

12. The system of claims 1 wherein the array of coplanar parallel capillary electrophoresis tubes comprises at least 96 capillaries.

13. The system of claims 1 wherein the array of coplanar parallel capillary electrophoresis tubes comprises at least 384 capillaries.

14. A method of separating and detecting components in a complex biological sample by two dimensional separations, comprising:

(a) subjecting said sample to a first separation and detection means to a plurality of fractions;

(b) collecting said plurality of fractions in a fraction collection means; and

(c) subjecting more than one fraction of said plurality of fractions simultaneously to a second separation and detection means, wherein said second separation and detection means is based on a different property of the component being separated than said first separation and detection means.

15. The method of claim 14, further comprising the step of dye labeling said complex biological sample before subjecting said sample to the first separation and detection means.

16. The method of claim 14, further comprising the step of dye labeling said fractions of the complex biological sample after collecting said fractions into said fraction collection means.

17. The method of claim 14, further comprising the step of adding controls labeled with mobility-matched dyes to the fractions after said collecting step.

18. The method of claim 14, whereas the first separation and detection means consists of HPLC, FPLC, ion exchange chromatography, hydrophobic interaction chromatography, affinity chromatography, isoelectric focusing, isotachophoresis, capillary zone electrophoresis, micellar electrokinetic chromatography, electrochromatography, field flow fractionation, solid phase extraction, liquid phase extraction, or any other standard separation means.

19. The method of claim 14, whereas the second separation and detection means is a highly parallel capillary gel electrophoresis system.

20. The method of claim 19, wherein galactomannans is used as a sieving matrix in the second separation and detection means.

21. The method of claim 19, wherein dextran is used as a sieving matrix in the second separation and detection means.

22. The method of claim 14, whereas said fraction collection means consists of a microtiter plate.